

# FMCSA GUIDELINES FOR **SAFETYNET Computer Systems** SOFTWARE AND HARDWARE ISSUES

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This document contains the guidelines for software and hardware components necessary to run the SAFETYNET database management system.

## Software Components

The recommended software needed to operate SAFETYNET is shown below for both networked and stand-alone configurations.

## Network Configuration

- **OPERATING SYSTEM**
  - **Client:** Microsoft Windows 2000 workstation, or Microsoft Windows XP Professional\*
  - **Server:** Microsoft Windows 2000 Server, or Microsoft Windows 2003 Server
- **DATABASE MANAGEMENT SYSTEM:** Oracle Workgroup 8.1.6 (provided by FMCSA).  
Planned upgrade to Oracle 10g within 6 to 9 months (Upgrade will be supplied by FMCSA).

## Stand-Alone Configuration

- **OPERATING SYSTEM:** Microsoft Windows 2000 workstation, or Microsoft Windows XP Professional
- **DATABASE MANAGEMENT SYSTEM:** Personal Oracle 8.1.6 -- (provided by FMCSA).  
Planned upgrade to Oracle 10g within 6 to 9 months (Upgrade will be supplied by FMCSA).

## Both Configurations

- **APPLICATION:** SAFETYNET System application software.
- **REPORT GENERATOR:** Crystal Reports 8.5 Runtime Engine -- Pre-defined report/query generation software (included with SAFETYNET software).
- **COMMUNICATIONS:** DISTINCT TCP/IP -- for connection with SAFER Data Mailbox (included with SAFETYNET software).
- **AD-HOC REPORT/QUERY GENERATION SOFTWARE** (optional): Crystal Reports Professional 8.5 or higher is recommended.

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\* While it is known that SAFETYNET will run on Windows 95 and Windows 98 Second Edition, this operating system is no longer supported by FMCSA Technical Support. Microsoft Windows ME has never been supported.

## Hardware Components

The recommended hardware configuration to operate the SAFETYNET System is shown below for both networked and stand-alone configurations.

The “preferred” specifications should be used for new hardware purchases. Note that rapidly changing computer technology will make even these preferred specs seem conservative. New procurements should reflect specs above the preferred where both best price & performance benefit. The “minimum” specifications below correspond to the use of existing hardware. Note that hardware satisfying only the “minimum” specifications may result in significantly slower performance when running SAFETYNET. Performance on older hardware may be further degraded by future updates to SAFETYNET.

The specifications below are for the SAFETYNET application only. More powerful hardware may be needed if running other major applications or services simultaneously with SAFETYNET on the same machine.

## Hardware for Network Configuration

Several items are worth noting before listing the specific hardware components necessary to run SAFETYNET in a networked configuration.

Depending on the number of users connected to the network and the amount of network traffic, it will be beneficial in some cases to separate the database server from the network server to improve overall performance of the network as well as the SAFETYNET application.

The selection of the database server platform is also a serious consideration. With Oracle, the database server must be run on a Windows NT-based platform (Windows 2000 Server, Windows 2003 Server, Windows XP Professional). The SAFETYNET application, however can reside on a Novell NetWare server if separating the database from the application is a desired configuration. Note that a Windows NT database server can co-exist in a Novell NetWare environment.

Note that while Intel Pentium® processors are listed, there are no known problems with AMD Athlon® or similar Windows-compatible processors with processing capabilities similar to the Intel Pentium line.

### Database Server

- **Processor:**
  - **Preferred** – Intel® Xeon™ processor (or equivalent) @ 3 GHz, 533 MHz FSB
  - **Minimum** – Intel® Pentium IV processor (or equivalent) @ 1.5 GHz.
- **Memory:** 1 GB RAM preferred, 512 MB RAM minimum  
(note that memory requirements increase as the hard disk size increases)
- **Hard Disk:** 20 GB or better preferred, 8 GB minimum. Performance and reliability will improve with 3 or more physical hard drives configured in a RAID. If only 1 physical hard drive is available, prefer this to be configured as 2 logical drives.

- **Peripherals:**

- Monitor and video adapter  
(The server is not intended for use as a workstation, so monitor selection is at the user's discretion.)
- CD-ROM drive
- Tape backup system: DLT format preferred.
- Uninterruptible power supply (UPS)
- An appropriate Network Interface Card (NIC)  
(some servers may benefit from multiple NICs)
- Microsoft-compatible mouse

### **Client Workstation**

- **Processor:**

- ***Preferred*** – Intel® Pentium IV processor (or equivalent), 3.2 GHz processor speed, 800 MHz FSB.
- ***Minimum*** – Intel® Celeron processor (or equivalent), 1.5 GHz processor speed, 400 MHz FSB.
- ***Bare Minimum***<sup>†</sup> – Intel® Pentium III processor (or equivalent), 600 MHz processor speed, 100 MHz FSB.

- **Memory:** 1 GB RAM recommended, 256 MB RAM minimum.

- **Hard Disk:** 80 GB preferred, 20 GB minimum.

- **Peripherals:**

- 17" high-resolution monitor minimum
- Video graphics adapter 800x600 minimum resolution (1024x768 preferred)
- CD-ROM drive
- One parallel printer port (or access to a network printer)
- Uninterruptible power supply (UPS)
- An appropriate Network Interface Card (NIC)
- Microsoft-compatible mouse
- Fax modem: 56kb/s minimum (optional – not needed at each workstation)

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<sup>†</sup> The "Bare Minimum" specification is provided only for installations where purchase of a new PC is not possible. It is known that SAFETYNET's client will operate on this configuration, but performance will be less than desirable.

## Hardware for Stand-Alone Configuration

The hardware components needed to run a stand-alone configuration of SAFETYNET are as follows:

- **Processor:**
  - **Preferred** – Intel® Pentium IV processor (or equivalent), 3.2 GHz processor speed, 800 MHz FSB.
  - **Minimum** – Intel® Pentium IV processor (or equivalent), 1.5 GHz processor speed, 533 MHz FSB.
- **Memory:** 1 GB RAM recommended, 256 MB RAM minimum.
- **Hard Disk:** 80 GB preferred, 40 GB minimum. Performance and reliability will improve with 2 or more physical hard drives. If only 1 physical hard drive is available, prefer this to be configured as 2 logical drives.
- **Peripherals:**
  - 17" high-resolution monitor minimum
  - Video graphics adapter 800x600 minimum resolution (1024x768 preferred)
  - CD-ROM drive
  - One parallel printer port (or access to a network printer)
  - Uninterruptible power supply (UPS)
  - An appropriate Network Interface Card (NIC)
  - Microsoft-compatible mouse
  - Fax modem: 56kb/s minimum (optional – not needed at each workstation)